



RECENT TRENDS IN RESEARCH & INNOVATION TECHNOLOGY IN CONNECTION WITH INDIAN CLASSICAL MUSIC

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ABSTRACT

Changing trends in performing arts rarely manifest themselves with dramatic abruptness. More often than not, they creep up silently, diverting the flow of continuing traditions and practices stealthily but resolutely. As the relentless tidal wave of globalisation swept across the world in the last two decades, Indian performing arts too were swept, tossed high and hurled down, without many even noticing that some of the great rivers of performing traditions and systems had changed course or, at times, been reined in forcefully. Looking back on some of these changes, particularly in the sphere of Indian music, it may be worthwhile to begin by examining a few words, terms and phrases that provide clues to some of the many ways in which globalisation has impacted the performing arts in India.

Other than in academic discussions, performing arts in India and its practitioners are today referred to most commonly as being part of the “entertainment industry.” This may seem innocuous enough to some, but the usage of the term and its passive acceptance in most circles definitely indicate a paradigm shift in the manner in which the arts are viewed by society at large. That today the arts must entertain and amuse in the manner defined by showbiz, and that they must form part of organised industry is the clear and unambiguous message conveyed by this shift. For creators and artistes who, in an ideal world, create art driven by an artistic urge or by that inexplicable creative charge that propels artists towards their respective forms of expression, this shift from being an individual artiste or part of an artistic community, to being absorbed into or discarded by the politics and commerce of the entertainment industry, has had a far-reaching impact.

KEYWORDS: Performing Arts, Traditions, Globalization, Entertainment Industry, Trends, Innovation.

INTRODUCTION

This report is to analyze of various new trends in Indian music industry. The research is based on Sony Music Entertainment India Pvt. Ltd. It is a wholly owned subsidiary of Sony Music Entertainment, Inc (SMEI), New York. It is one of the most famous recording companies in the world and growing its business in India rapidly, as Indian music industry is famous for its bollywood (Indian film industry) music, and its growing business in Indian market. The organization and the country chosen in this report is to explore its recent trends and the factors which affecting the company as well as the Indian music industry (IMI). IMI is not an ordinary industry, as it is one of the important sources of revenue for Indian government.

The report is focused on the Indian music industry and its new trends and pre and post conditions related to these trends. The main structure of the report is three important parts which includes four trends which are supported by various articles, journals, reports, online information and data and other various literature which support the evidence of all four trends and followed by the scenarios based on deductive approach and finally, the implications of these trends and on the basis on which conclusion is drawn. The report is completed based on knowledge acquired in the class, secondary data and the great support from Mr. Stephen McGrail.

The creative mind is characterised by its ability to be unique and individualistic. Originality, therefore, comes from the natural ability of an artiste to be distinctive and different from the pack. In the globalised world, originality is wooed only to the point where it can be made a unique selling point or USP. Thereafter, it is expected to quietly conform to the templates of selling that are currently in fashion. In the context of Indian music, this would mean that in order to attract an international market, the Indian musician must retain some part of his or her Indian identity, but only in such measure as would set him or her apart and not make their ethnicity frighteningly unfamiliar or alienating. Thus the emergence and success of rock and fusion bands who play rock music as it would be played anywhere in the world, but retain some token Indian-ness. Rock musicians donning turbans, jackets, kurtas and vaeshtis made of handloom cloth, skirts or lehangaas and other items of ethnic clothing as costume; Kathakali face paint or kutchi ghodi, work hard to roll their r's into sounding as 'international' as possible. In a globalised world, Indians are fast losing touch with the charm and beauty of regional languages and dialects. Urban Indians have for decades urged their children to acquire fluency in English in a bid to secure admissions to high brow educational institutions, and to further professional careers. And now increasingly the rural population of India is following suit. In such a situation, genres that relied heavily on literature and poetry such as the ghazal have taken a severe beating. Once a form that enjoyed massive popularity, the ghazal today faces a bleak future. Some exponents of this genre made attempts to modify the form to suit popular taste and preference. In the process, some abandoned the complex and evolved poetry of the great masters of Urdu, and opted to present simple texts that could be enjoyed by even those who did not fully comprehend the grandeur of classic Urdu poetry. While this strategy brought them some

amount of fame and popularity for a short period of time, it did not, by any means, save the ghazal from becoming nearly extinct. Other exponents attempted to use catchy and even slightly westernised tunes with musical interludes and backing orchestras that would be more appropriate for hip hop or Indi pop. Music videos too did not help the floundering form and ultimately the ghazal specialists ended up branching out in other directions. Some took to bhajans, others to playback and still others accepted anything that came their way.

Over a century ago, Indians struggled to establish a national identity. Today, it is the lure of a global identity that Indians pursue, for better or for worse. And if, in the bargain, art forms are lost or sacrificed at the altar of globalisation, it does not really matter to most. Indeed, all living art forms are dynamic and changing rather than static or stagnant.

Top 20 trends in Research & Innovation Technology may be related to Indian Classical Music

Based on intensive research, consultation, validation and prioritisation the final result is a list of top 20 trends with major potential for growth and impact from 2020 towards 2025:

1. Information and Communications Technology (ICT);
2. BIO, Health & Life Sciences;
3. Environment, Energy and Climate Change.

Information and Communications Technology (ICT)	BIO, Health & Life Sciences	Environment, Energy & Climate Change
1) 3D Printing Molecules	8) Cognitive Augmentation & Intelligence Amplification	14) Energy Efficient Water Treatments
2) Adaptive Assurance of Autonomous Systems	9) Regenerative Medicine	15) Algae Against Climate Change
3) Neuromorphic Computing (new types of hardware) and Biomimetic AI	10) Drug Discovery & Manufacture Using AI	16) High-Temperature Superconductivity & Twist Electronics
4) Limits of Quantum Computing: Decoherence and use of Machine Learning	11) Bioinformatics & AI in 'Omics'	17) Self-Healing Batteries
5) Ethically Trustworthy AI & Anonymous Analytics	12) Cellular Senescence & Life Extension	18) Net Zero Concepts (buildings) & Beyond Smart Grids
6) Beyond 5G Hardware	13) Bio Robotics/Bionics	19) Arctic Climate Change
7) New Approaches to Data Interoperability in IOT		20) Zero Power Sensors & Ocean Wiring and Sensing

Music Recognition Technology

The music industry faces a massive challenge when it comes to monitoring and tracking where and how often a song is being played. Without effective Music Recognition Technology (MRT) artists, publishers, and other rights owners lose their royalties each time music is played in a club, bar or any other venue. And, of

course, this is a very serious problem, with some estimating that 25–35% of mechanical licenses in the U.S. are unrecognized on streaming platforms alone. Fortunately, a range of experts around the world are working diligently to solve this major issue through MRT innovations and implementation.

Automatic music recognition isn't new. In fact, Broadcast Data Systems (BDS) was widely-deployed by the early 1990s for recognizing songs played on U.S. radio stations. However, even though the core algorithm for recognizing music has existed for decades, a large percentage of venues are still not adequately equipped with MRT. The good news is that many companies such as DJ Monitor heading up the technology side. And of course, once the music is effectively recognized, the data is sent to the performance rights organizations (PRO) that handle payment distribution. Paris-based Yacast is another tech company working in this space, as well as SoundHound Inc.'s Houndify, Google's Sound Search, and others.

Artificial Intelligence

AI usage is proliferating throughout the music industry in two ways: for predictive analytics and composing music. On the predictive analytics side, experts are now using AI to predict the musical tastes of users based on song duration. Researchers determined that people will cancel the playback of songs they dislike and will listen all the way through songs they enjoy, which can be used to provide a base dataset to train a machine learning-powered recommendation engine.

Machines being used to compose music is certainly a controversial concept. Can something as personal and emotional as music be created by AI with positive results? Although the answer depends on who you ask, many tech brands are experimenting with this idea, including Sony and IBM, using musical components like mood, cadence, and style to compose new songs. An example of an AI composition program is The Flow Machine Project, led by Francois Pachet at Sony Computer Science Laboratories and Pierre and Marie Curie University. With the aim of “designing and implementing the next generation of authoring tools,” The Flow Machine Project can be used by songwriters to create a base from which to expand upon or even to completely compose a track.

AR, VR & Holograms

You've certainly read statistics about the fact that millennials prefer to spend their money and time on experiences rather than on objects, and the industry is taking note. At the same time, experiences need to have true value to gain traction with younger audiences. Industry players are experimenting with various ways to use AR, VR, and holograms to create exciting experiences for consumers in the world of music. AR can be used to bring a video to an audience and make the listener part of the video. And how about using AR to bring a concert to fans in their own environment? The possibilities are virtually limitless, and I expect to see massive innovations in this sector in the coming year.

VR and music are a natural fit, and although 360-degree videos have garnered some attention and interest, they're just the beginning of what's to come. Imagine if artists added an extra date on their tours to perform from their studio for millions of people wearing high-end headsets in the comfort of their own homes?

Wearables

Many innovations are being worked on in the field of music wearables. One fascinating example is BodyRocks, a company that creates wearable technology that translates audio signals into physical vibrations onto the body. It's a very interesting concept that seeks not to make you feel like you're standing next to a giant speaker rumbling the floor at a concert, but instead to develop an immersive physical experience from listening to music. And what about sunglasses? Music software experts Echo Music have designed IP6 waterproof bone-conduction sunglasses that play music and radio without completely cutting off the world around the user. Without the need for any wires, bone conduction technology transmits sound waves to the skull via vibrations. Additionally, Echo Music's product includes an advanced sound-leak reduction system to prevent others from being subjected to hearing the user's music.

Personalization Is Crucial

Today's music listeners expect highly advanced personalization when using streaming services. And this expectation will definitely grow in the coming period. Platforms such as Spotify and Apple Music are leaders in this space, but we have yet to fully realize the possibilities of personalization in the world of streaming music.

Technology is at the forefront of advancements in personalization. By combining machine learning with human curation, data-driven playlists are capable of getting smarter over time, resulting in fine-tuned personalization at an astonishing level. The potential enhancements to recommendations and social discovery in conjunction with sophisticated algorithms and other technological innovations will be a major focus for streaming platforms and the industry at large in the coming period, thereby creating an increasingly personal and enjoyable user experience.

Artist Promotion Toolkits

Both labels and streaming platforms are increasingly invested in offering

broader services to artists. A recent example is UMG releasing an in-house artist analytics app. “Universal Music Artists” is available for all artists on the record label and their managers to provide them with a wealth of invaluable information. Describing the product as the first all-in-one app for artist analytics, users gain access to data from major streaming platforms as well as social media engagement information from Twitter, Instagram, and Facebook. Additionally, the app displays YouTube views and detailed data about top countries, demographics, and more.

Although Spotify was the first major streaming service to provide artists with insights into their listeners, Apple Music and UMG are now both deeply involved in analytics for artists, and I expect to see significant enhancements to such offerings over the next year.

5G For Streaming

Earlier this year Amazon unveiled its new Music HD service, bringing lossless audio streams and downloads to fans in the US, UK, Japan and Germany. A move that many believe will eventually make this niche offering mainstream. High-fidelity music streams will be easily consumed with 5G, so I expect to see a major expansion of these offerings once the faster speed is commonplace.

Furthermore, live streaming of music videos and concert will go to the next level with enhanced 5G speeds and low latency. VR, AR, and hologram shows, such as we've seen for Roy Orbison, could reach much wider audiences with 5G while allowing for further innovations in the delivery of data-rich content in the context of live concerts and other high-tech experiences to our personal devices.

Industry and market background

The reason to choose the music industry as a topic to researcher is due to the things making our attention in the world like in UK, at least 7 million people use illegal downloads, costing the economy billions of Dollars and thousands of jobs, according to a report. Which reflect that the illegal downloading is robbing the world's economy with millions of Dollars every year and seriously damaging business, innovation and music industry throughout the world. This is something which really need attention from the masses as well the government in tackling this issues.

The economic trend which can be seen in the Indian Market is the “Rising of middle class “as we know Indian is the one of the world largest economy with good purchasing power which is in the hand of the middle class as the population density of India is more toward middle class. This is effecting the Indian music industry as the buying capacity of the music gadget or the instrument which now a day's mostly work on the digital storage and flash storage as they are more compact and mobile regardless of the old sources like walkman and the Disk players.

Second, India's service industry accounts for 55% of the country's Gross Domestic Product (GDP) in which digital market growing in the steady flow. Lastly, the wealthiest of younger and there westernization as more and more go study overseas and come back with a better paid career. In which the Australia is the second largest group of overseas students in number after China. They are building a larger middle class, and also their appetite is influenced is more towards western lifestyle.

Post-condition to sustain this trend in future are firstly the increasing number of legal website exists like iTunes Store for downloading and the rule and regulation will increase their extend to all these downloading site. Secondly, post-condition is the technologies in the Indian market will grow and will keep them up to the mark with the world in reference to the music software, music formats and device to play with.

The pre-condition of the trend in which the companies focusing on Internet Entertainer is due young generation is turning toward the short term entertainment and they really starting love it as there million of Face book posted video which is high supported from the youth which reflect that more population involving there most of the time in day doing social-networking whether its on Laptop, desktop or Mobile. This culture is also increasing due to increasing affording capacity of this youth market.

The Post condition which is required to sustain this trend are firstly, the increasing in number of IPTV's channels from the help of the internet provider. Secondly, rising patent and copy right law and the issues related to them and last the increasing number of posted video which lead to the numbers of talents and self made celebrity.

Legal trend

The trend is Copyright for Remixes, where Remixes are nothing but some changes made to original songs in other words old wine in new bottle. And the most important issue is the young generation enjoys remix song more than that of original songs and it is an easy way of popularizing old forgotten songs. And as remixes are copied of already existing musical works so issue of copyright is an important issue in India. In over past few years the huge sale of this kind of music proves that people like this kind of music. And this new trends is good for both customers and Indian music industry, as customers are getting more variety of music and good for industry as it gaining new talents and upsurge in revenue, for

example an old song "kaanta laga" is remixed and released in year 2003 by an Indian music company T-series and its has taken remixes to a new height and boom the remix market.

Evidence

From year 2001-2004 around 5500 cases were registered by Indian music industry and government official seized 25 lakh compact disc. And the according to the copyright act 1957 "5 percentage of the share from the first print order has to be sent as royalty to the song owner (singer)"

Pre-Condition

Pre condition that leads to this trend is that artists are start losing loyalty and they getting less money as most important task is done by them and the remix artists making lot of money. And government and Indian music industry estimated that because of piracy they had a loss of 190 million U.S dollars in terms of sales tax, excise duty, and income tax. And most important Indian consumers are suffering because they are buying poor quality of products and supporting the theft of intellectual property.

Post Condition

There are several post conditions of this trend like growth of more online distributors in India few e.g. Fabmart.com, soundbuzz.com, musicurvy.com, vindia.com, audiofind.com, mp3.com are some of the websites frequently visited by music fans to download Indian as well as international music, musicurvy.com is the only Indian portal to have obtained license to host and play Indian music online. Secondly increasing copyright protection of online contents as Indian music industry (IMI) has set up Anti-piracy team in year 2000 for internet security which is headed by a famous Indian official who has been working with IFPI to face piracy in India and the result of this IMI has managed to close five hundreds sites which enables consumers to download music illegally. IMI also focusing on Websites which are involved in streaming and downloading Indian music with the collaborations of IFPI (IFPI represents the recording industry worldwide, with a membership comprising some 1400 record companies in 66 countries and affiliated industry associations in 45 countries) and the most important initiating actions against consumers downloading music through P2P transfers which result the famous downloading source KAZAA is closed. And for the success of all this effort retailers increasing extent of rules by government specially remix music retailers.

The technological trend

This trend refers to the technology boom which leads to the strong competition in the technological market which leads to cheap and quality products. As the increases consumption of the desktop, laptop and the other digital devices in India. It brings the technology as the internet that is a significant influencer directly to the Indian music market. Especially, the online market stimulation which fulfills the customer need and bring low cost and quality of product (IMI 2005).

Scenario Methodology

To analyze how the four trends interact between each other, we employ a cross-impact table in which vertical columns are active, and the horizontal ones are passive. With the help of this we will conclude the most uncertain factor to analyze the future scenario.

We are using deductive method to analyze the music industry's future scenario. We have chosen the two most uncertain factors from the cross impact table that mostly influence the future of this industry in India are:

Extend of the government of rule and regulation. Adoption of high-tech life style.

Extend of the government of rule and regulation

As we know that Indian is the Country with the second Largest population in the world and the government structure is very complicated which can create in the uncertainty in the adoption of the rule and regulation in Indian as whole. But in this Factor we are taking about the measuring and the extend of the rule and regulation the government impose in the country to measure and monitor the online activities. (E.g. Bit torrent)

The extend of the rule which can be imposed can be on the legislation on using a musician's product in any sense (e.g. processing remix of original songs) will have to pay the copyright fee or loyalty to the musician and company as well as the artist because at the moment no one is paying for using anyone works to remake

Adoption of high-tech life style

As we talked about population of the India in previous uncertainty factor ,the same things also refer here that the Indian population is very diversified in the sense of age ,cast and religion .And the adoption to the new high-tech life style is somewhere widely excepted and somewhere not. And the young population which we are mainly targeting can be ridged in some part and open in some part of India which depend on the background they came from and ultimately influence the music industry.

Following figure we have shown the deductive method. In which we have taken both the uncertainty factor on the axis to find out the future scenario for the music industry. With the help of this we are able to formed four quadrants by using the uncertainty variable in which each of them stands for a possible and Negative scenario which can occurs for the Indian music industry.

Description of Scenario.

Scenario 1 – Internet Parade

Low legislation vs Low technology adoption.

It very much represent the present situation of market, when nearly all the resources are available freely and people don't always pay copyright fee even if they use music products digitally i.e. downloads. This will probably happen because of low extend of the Rule and regulation from the government will favor people to hunt for free downloading site.

Scenario 2 – Websites Wins

Low legislation vs High technology adoption

Will lead to scarce of free downloadable music recourses because of high technology innovation on coding of digital information and websites start to charge for downloads or paid sign up for downloading.

This will happen because there is a universal discipline when it is about resource; it would be business opportunity for the online retailer but not for the government revenue as due to low regulation.

Scenario 3 – Grey Market

High Legislation vs. Low technology adoption

Objectively there will be large amount for downloadable or transitable music products, but will be highly restricted by Government Regulation and laws. So the situation could be that the downloading or sharing behavior would convert to 'underground' way through social network and with sharing of content through communities like face book, AOL, MSN, QQ and other chatting tools and networking sites.

This will possibly happen when there is strict prevention of illegal downloading, the websites providing this would disappear and social communities and chatting tools would take relay of this thing because they are extremely popular among peers and they surely can be a good media for transmitting digital property products by friends-sharing between individuals, without offending the law.

Scenario 4 – Bright Era

High legislation protection vs. High technology adoption.

This is favorable future for music industry. Customers have to pay for all online resources, and they cannot be transited easily and the Artist and Creator won't lose their loyalty.

But in real sense this is somewhat difficult to happen, because either of the legal and technology part will meet obstacle, even also the music companies work hand-in-hand with government. The concerning issues related to resistance of internet users, among who are majority brought up in an digital environment that all the transformed products should be shared freely, and ignorance and lack of consciousness of intellectual property in developing countries. And also both of their process takes long time, maybe decades to actually implement practically. Key Opportunity

Online retailer and the big music company like Sony Music will have the opportunity to work with the government hand to hand regarding the copyright issues and the other related issues to protect their right as well the artist loyalty . This digital market will give Indian music industry a new face which will be broader and full of new opportunities which will help the Indian music industry to grow worldwide.

This will lead to improvement in the quality of the music and with the advancement of the technology the more file format will come for the music for example: mp3, FLV, WMV, and ACC. Many more coming in future.

CONCLUSION

After the Depth research of the industry and the chosen market we can conclude that the growth of this industry in the future is favorable and proposed scenario may occur in which the most favorable are 'Grey Market' and the 'Bright Era'.

The movement of the physical CD's and the DVD will decrease or we can say will demolish as we can see these days and the future will be more of the flash drives and the digital market .With the help of the technology the government will have the more power to monitor and track the online downloads and the uses will help the government to generate the more revenue from the online industry which they are losing these days.

The Artist and the music producer as well the singer will be free to circulate their work or art as due to high regulation and rule on online market their work will be protected and which will give the freedom to share with the world without fear of copy or illegal Issues.

Lastly we conclude that the more and more Music company will work in hand in hand with the online entertainment sites Like YouTube, You ku, etc.

REFERENCES

1. Bakshi, Hareesh. (2002). "Soundofindia." 2002, 2003. www.soundofindia.com/showarticle.asp?in_article_id=-1760104438 (accessed January 17, 2017).
2. Drummond (2001). "The Classroom Music Teacher -inspirations, aspirations and realities. The evidence from Northern Ireland". British journal of music Education, Vol. 18, 5-25.
3. Gallagher, Darren. The Effect of Digital and Social Media in the Music Industry. November 2013. <https://theorganicagency.com/blog/effect-digital-social-media-music-industry/> (accessed September 1, 2017).
4. Kapur, Jay (2002). "Digitizing North Indian Music." Princeton: University of Victoria,.
5. Khan, John Rahn and Ustad Imrat (1992). "An interview with Ustad Imrat Khan. "Perspective of New Music, 30(2): 126-145.
6. Patke, Rajeev S. (2007). "Thinking Dialectically of north Indian Classical Music. "In Music and Modernity, edited by Amlan Das Gupta, 32-59. Kolkata: Thema.
7. Mehta, R.C. (2011). Indian Classical Music and gharana tradition. 2nd. New Delhi: Read Worthy, 2011.
8. Raja, Deepak S. (2007). Hindustani Music :A tradition in transition. 1st. New Delhi: D.K. Printworld (P) Ltd.,.
9. Singh, Nivedita (2004). Tradition of Hindustani Music . New Delhi: Kanishka Publishers, 2004.
10. Vedabala Samidha (2016). "Indian Classical Music in a Globalized World" Sangeet Galaxy, Vol. 5, Issue-1: 3-9.
11. "Wikipedia. (2016). " September 25th, 2016. <https://en.wikipedia.org/wiki/Riyaz> (accessed March 04th, 2017).